VITTORF, M. V.

"Principal Tendencies in the Development and Construction of Drilling and Mine Drilling Machinery"

(New Developments in the Methods and Techniques of Geological Exploration)
Leningrad, Gostoptekhizdat, 1958. 423 p. (Series: Its: Sbornik trudov I)

VITTORF, M.V.

MARAMZIN, Aleksandr Vasil'yevich; YERMOLAYEV, Vasiliy Mikhaylovich;
VITTORF, M.V., redaktor; PERMINOV, S.V., redaktor; GENNAD'YEVA,
I.M., tekhnicheskiy redaktor

[Drilling structural and exploratory wells] Burenie strukturno-poiskovykh skvazhin. Leningrad, Gos.nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1955. 363 p. (MLRA 9:3)
(Boring machinery) (Oil well drilling)

VITTORF, M.V.

Basic trends in the development of drilling and mining machine manufacturing. Trudy VITR no.1:359-365 '58. (MIRA 12:1)
(Mining machinery)

VITTORIO, GIUSEPPE di

Italy - Trade Unions

Role of trade - unions in the defense of democracy. Vsem. prof. dvizh. no. 11, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED

VITTORIO, GUISEPPE di

TRADE-UNIONS - ITALY

Role of trade-union in the defense of democracy. Vsem. prof. dvizh. no. 14, 1952.

Monthly List of Russian Accessions, Library of Congress, November, 1952, UNCLASSIFIED

VITTORIG, GUISEPPE DI

Trade-Unions

Our fundamental task is the defense of trade-union rights. Vsem.prof.divzh. No. 15, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 195~~3~~2, Unclassified.

MYULLER-BUSHBAUM, G. [Müller-Buschbaum, H.]; VITTSMAN, G. [Witzmann, H.]

Fluorescence of rare earths. Opt. i spektr. 18 no.4:621-627 Ap '65. (MIRA 18:8)

1. Institut fizicheskoy khimii Greyfsval'dskogo universiteta Germanskoy Demokraticheskoy Respubliki.

[illegible]

ACCESSION NR [illegible]

535.373.1

AUTHOR [illegible]

TITLE [illegible]
based on borate and activated with cerium [illegible]

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 622-627

TOPIC TAGS: rare earth, fluorescence, borate, luminor, emission spectrum, activator

ABSTRACT: Part I of the article was published in Opt. i spektr. v. 18, 432, 1965. This part is devoted to an investigation of the redistribution of energy in samari- [illegible] not been previously explained. [illegible] emission spectra [illegible] borates of group II elements activated with cerium and samarium and excited with ultraviolet has shown that all such phosphors have a similar line spectrum, which is characteristic of fluorite-type structures. The energy redistribution in the [illegible]

Card 1/2

L 61677-65

ACCESSION NR: AP5011114

[illegible] lattice has a large fluores-

[illegible] cerium borate produced by reaction in the solid phase. Orig. art. has: [illegible]

ASSOCIATION: Institute of Physical Chemistry, Greifswald University (E. Germany)

Card 2/2

[illegible] IJP(c) JD

ACCESSION NR: AP5006429

8/0051/65/018/003/0432/0439

32

Vittsman, G.

tor, borate compound, group II [illegible]

ABSTRACT: The method of line fluorescence of rare-earths, proposed by R. Tomaschek (Ergebn. Exakt. Naturwiss. v. 20, 268, 1942), is used for an analysis of the emis- [illegible] the II group of the periodic system, which can [illegible]

Card 1/2

L 43881-65

ACCESSION NR: AP5006429

already known borate luminors activated with lead and thallium. The data are used [illegible] to the influence of the host lattice on the activator. The emission [illegible]

[illegible]

Card 2/2

S/009/60/000/005/002/003
B027/B076

AUTHORS: Ovanesov, G. P., Vitugin, P. I.

TITLE: Prospecting for oil in Famennian deposits of Bashkiriya

PERIODICAL: Geologiya nefti i gaza, no. 5, 1960, 6-9

TEXT: In February 1957, it was for the first time determined that the oil occurrence in the upper Famennian deposits in Bashkiriya are of industrial importance. A continuous yield of 30 tons/24 h from different drillings indicates that the entire Tuymazy-Serafimovskoye area is prospective with regard to Famennian oil. In various fields the occurrence of oil was discovered in the carbonate deposits of the Devonian and Carboniferous layers, so that it is absolutely necessary to intensify prospecting on the Bashkir plateau. The oilfield Subkhankulovskoye, the best known deposit with accumulations in the carbonate is tentatively being exploited. This oilfield has a typical plateau structure in a southwest to northeast direction; the fold has two domes. 19 drillings were made, 12 of them yielded such amounts of oil that an industrial utilization is possible. The Famennian oil is approximately three times less viscous than oil from

Card 1/3

S/009/60/000/005/002/005
B027/B076

Prospecting for oil in Famennian...

the carbonaceous layer of the Serafimovskoye oilfield and contains less sulfur. As a rule, the oil is deposited between the individual layers of cracked limestone. It is difficult to determine the water-oil contact, as at the same intervals oil was obtained from some wells without water and from others oilfield water without oil was obtained. It is possible that the oilfield water penetrates from other zones or through fissures into the lower layers; it is also possible that water bearing horizons are present in the lower Famennian layers. From these findings the authors conclude that oil occurrences in the carbonate deposits are of peculiar type and difficultly to be exploited. At present, promising oil bearing carbonate deposits are being determined according to the findings of the drilling, such as core or oil in the washing fluid. The sinking of the bore holes is also difficult as the washing fluid penetrates into the fissures of the productive part of the cross section and obstructs them. Research institutes and industrial organisations have until now devoted too little attention to the carbonate rock formations and their oil bearing characteristics. Reliable geophysical methods for the determination of individual porous parts and for estimating the oil bearing characteristics are necessary and also the carbonate layers must be more

Card 2/3

S/009/60/000/005/002/003
B027/B076

Prospecting for oil in Famennian...

carefully studied. There are 2 figures.

ASSOCIATION: Bashneft', Oktyabr'skneft'

✓

Card 3/3

OVANESOV, G.P.; VITUGIN, P.I.; YEFREMOV, Ye.P.

Results of forced production of the layer D_{II} of the Konstantinovskoye field. Geol. nefti i gaza 6 no.6:12-16 Je '62. (MIRA 15:6)

1. Bashkirskoye TSentral'noye neftyanoye upravleniye i Neftepromyslovoye upravleniye Oktyabr'skneft'.
(Bashkiria—Petroleum geology)

OVANESOV, G.P.; VITUGIN, P.I.

Prospecting for oil in Famenennian sediments of Bashkiria. Geol. nefti i gaza 4 no.5:6-9 My '60. (MIRA 13:9)

1. Ob"yedineniye Bashkirskoy neftyanoy promyshlennosti i Oktyabr'skneft'. (Bashkiria--Petroleum geology)

VITUKEVICH, E.R., kand. biolog. nauk

In the quarantine laboratories of the Ukraine. Zashch. rast. ot vred. i bol. 8 no.10:48-49 O '63. (MIRA 17:6)

1. Ukrainskaya karantinnaya laboratoriya.

VITUKEVICH, E.R., kand.biolog.nauk

Causes of crinosis on potato tubers. Zashch.rast.ot vred.i bol. 4 no.6:53 N-D '59. (MIRA 15:11)
(Potatoes--Diseases and pests)

USSR/Plant Diseases. Diseases of Cultivated Plants D-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91963

Author : Vitukevich E.R.
Inst : Ukrainian Scientific Research Institute for Vegetable Raising and Potatoes
Title : Studies on the Developmental Conditions of Potato Dry Rot in Storage

Orig Pub : Nauchn. tr. Ukr. n.-i. in-ta ovoshchevodstva i kartofelya, 1957, No 4, 257-263

Abstract : This study identified the group of fungi which cause potato dry rot in Khar'kovskaya Oblast: Fusarium coeruleum, F. solani v. eumartii, F. sambucinum v minus, F. solani, F. avenaceum. The agents of dry rot are able to develop within wide temperature limits (from 2 to 35°), wide limits of humidity (from 40 to 90 percent) and CO_2 concentration (to 30 percent). The optimum conditions for their development are as follows: temperature 17-25°, relative humidity of the air - above 70 percent and a free inflow of air. -- Ye.S. Artyunyan

Card : 1/1

VITUKEVICH, E.R., Cand Bio Sci —(diss) "Affliction of potato tubers with dry rot~~[illegible]~~ ~~in~~ during storage and measures of ~~combatting~~ controlling it." Khar'kov, 1958. 16 pp (Min of Agr USSR. Khar'kov Order of Labor Red Banner Agr Inst im V.V. Dokuchayev), 150 copies (KL,30-58,124)

VITUKHINA, A.S.

128

PHASE I BOOK EXPLOITATION SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye (Synthetic Zeolites: Production, Investigation, and Use). Moscow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady) Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Komisiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor of Chemical Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P. Golub'.

PURPOSE: This book is intended for scientists and engineers engaged in the production of synthetic zeolites (molecular sieves), and for chemists in general.

Card 1/[illegible]17

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Synthetic Zeolites: (Cont.) SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

Card 2/[illegible] 9

14

Synthetic Zeolites: (Cont.) SOV/6246

Card 3/13

L 12402-63 EPF(c)/EWT(m)/BDS Pr-4 RM/WW

ACCESSION NR: AP3001666 S/0065/63/000/006/0017/0021

58

AUTHOR: Piguzova, L. I.; Vitukhina, A. S.

TITLE: The preparation of sorbent CaX (10X) and its catalytic properties

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1963, 17-21

TOPIC TAGS: sorbent physicochemical properties, Na ions

ABSTRACT: A sorbent of the type CaX was prepared from NaX (13X) by means of exchanging Na for Ca ions. The conditions of the full cationic exchange in the synthesis of the molecular sieves of the type CaX (10X) has been determined. It was shown that with an increase of the degree of exchange of Na to Ca, the volume of adsorption based on 1,3,5-triethylbenzene decreases. Conditions are established whereby it is possible to obtain a CaX sorbent with an increased thermal stability for use in adsorption of water. The most useful and most rational method for the quality control of the sorbents of the type NaX and CzX and for the evaluation of their properties is the sorption of 1,3,5-triethylbenzene. It was shown that the catalytic activity of the molecular sieves of the type CaX in the cracking reaction of n-decane can be high and also stable. It increases in accordance with the degree of catalytic exchange volume of Na ions in the celite of the type NaX to Ca ions.

Card 1/2

MINACHEV, Kh.M.; GARANIN, V.I.; PIGUZOVA, L.I., VITUKHINA, A.S.

Isomerization of n-hexane on the Y-structure molecular sieves containing palladium. Izv.AN SSSR. Ser.khim. no.1:129-133 '64.
(MIRA 17:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
Submitted August 5, 1963.

VITUKHNOVSKAYA, B. S.

④ 7

Equilibrium in the system sodium fluoride-boric acid-water at 25°. A. G. Ryss, M. M. Slutskaya, and B. S. Vitukhnovskaya (I. V. Stalin Met. Inst., Dnepropetrovsk). *J. Appl. Chem. U.S.S.R.* 25, 157-61(1952)(Engl. translation); *Zhur. Priklad. Khim.* 25, 148-53(1952).—The formation of complexes in solns. of H_3BO_3 and NaF at 25° was studied by the method of simultaneous soly. The soly. of NaF or of H_3BO_3 increases sharply in the presence of the other. This indicates complex formation in soln. The eutonic soln. contains 41.31% H_3BO_3 and 12.83% NaF. The complex formed does not sep. from soln. From the change in soly. it can be seen that one mole of NaF binds approx. 2.5 moles of H_3BO_3. On the basis of the compns. of the solns. and their high viscosities, it was concluded that F-substituted polyborates are formed. H. Liebeskind

The ternary system Na_2SO_4-$Al_2(SO_4)_3$-H_2O at 0°. J. A. Skarulis, H. A. Horan, and R. Maleeny (St. John's Univ., Brooklyn, N.Y.). *J. Am. Chem. Soc.* 76, 1450-1(1954).—Partial reinvestigation of this system showed that the incongruently sol. alum does exist as a stable satn. phase over a considerable range. Cf. *C.A.* 29, 5003^4.
George W. Ziegler, Jr.

NF

VITUKHNOVSKAYA, B. S.

USSR/Chemistry

Card : 1/1

Authors : Ryss, I. G. and Vitukhnovskaya, B. S.

Title : Potassium and ammonium hexafluoromanganiates

Periodical : Dokl. AN SSSR, 97, Ed. 3, 471 - 473, July 21, 1954

Abstract : Experiments, for the purpose of obtaining K-and Am-hexafluoromanganiates by the introduction of a Mn-trifluoride solution into the concentrated fluoride solutions with consequent filtration and washing of residues, are described. Formation of hexafluoromanganiates was observed during continuous agitation of pentafluoromanganiates with concentrated fluoride solutions. The change in composition of the solid phase was determined by the change in color and crystal forms, and the composition of the crystals was established by the radicals method. Five references: 4-USA since 1887 and 1-USSR. Table, graphs.

Institution : The I. V. Stalin Metallurgical Institute, Dnepropetrovsk

Presented by : Academician, I. I. Chernyaev, March 26, 1954

VITUKHNOVSKAYA, B.S.

V, The hydration and solubility of manganese fluoride. I. G. Ryss and B. S. Vitukhnovskaya. J. Gen. Chem. U.S.S.R. 25, 617-20 (1955) (Engl. translation).—See C.A. 49, 11380i.
H. L. H.

CH

①

M.41

Vitukhuovskaya B.S.

USSR. ✓The hydration and solubility of manganese fluoride. I. G. Ryss and B. S. Vitukhuovskaya (Met. Inst., Dnepropetrovsk). *Zhur. Obshchei Khim.* 25, 613-7(1955).—A method is described for the direct synthesis of manganese fluoride tetrahydrate ($MnF_2.4H_2O$) by dissolving the carbonate in dil. HF at 0°. The soly. polytherms are given for MnF_2 and $MnF_2.4H_2O$. These have a common point at 23.5°. The transition from one form to the other occurs very slowly. The heats of soln. of MnF_2 and of $MnF_2.4H_2O$ were found to be equal to 5.22 and −3.75 kcal./mole, resp. The heat of hydration of MnF_2 was calcd. to be 8.97 kcal./mole and the heat of dissocn. of the tetrahydrate was calcd. as −51.01 kcal./mole. J. Rovtar Leach

①

VEKHOV, V.A.; VITUKHNOVSKAYA, B.S.; DORONKINA, R.F.

Changes in solubility of germanium dioxide in water with an increase in temperature from 0 to 100°C. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:1018-1019 '64.

(MIRA 18:5)

1. Dnepropetrovskiy metallurgicheskiy institut, kafedra obshchey i neorganicheskoy khimii.

VITUKHNOVSKAYA, B. S., Cand of Chem Sci -- (diss) "Investigation of certain flourides of two and valent manganese." Dnepropetrovsk, 1957 12 pp (Dnepropetrovsk Chemical-Engineering Institute im F. E. Dzerzhinskiy), 200 copies (KL, 31-57, 104)

5(2)

AUTHORS: Ryss, I. G., Vitukhnovskaya, B. S. SOV/75-14-3-11/29

TITLE: Titrimetric Determination of Manganese After Its Oxidation to Trivalent State (Titrimetricheskoye opredeleniye margantsa posle okisleniya do trekhvalentnogo sostoyaniya)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, pp 318-321 (USSR)

ABSTRACT: A simple method is described for the determination of Mn^{2+} ions, which is based on the formation of fluoro manganate. The first experiments with KNO_3 as oxidizing agent in the presence of HF indicated that the oxidation of Mn^{2+} does not proceed quantitatively. With ammonium nitrate however exact results were obtained (Table 1). The determination of the fluoro manganate formed can be carried out iodometrically or by means of titration with Mohr's salt. Fe^{3+}-ions do not disturb. In the presence of Cr^{3+} the dissolution and reduction of the precipitate of $CrF_3.MnF_3.6H_2O$ is accelerated by addition of boric and hydrochloric acid and the titration thus proceeds undisturbed. If Fe^{3+} and Cr^{3+} occur together, only the titration with Mohr's salt is possible (Table 3). The presence of Co^{2+} (up to 250 mg) or Ni^{2+} (up to 70 mg) does

Card 1/2

SOV/75-14-3-11/29

Titrimetric Determination of Manganese After Its Oxidation to Trivalent State

not disturb the iodometric determination of manganese (Table 4). The analysis was tried with ferromanganese alloys and yielded satisfactory results (Table 5). There are 5 tables and 9 references, 5 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railway Engineers). Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: May 13, 1957

Card 2/2

RYSS, I.G.; VITUKHNOVSKAYA, B.S.

Cerium and chromium fluoromanganates. Zhur. neorg. khim. 3 no.5:1185-1187 My '58. (MIRA 11:6)
(Cerium compounds) (Chromium compounds) (Complex compounds)

Vitukhnovskaya, B. S.

78-3-5-21/39

AUTHORS: Ryss, I. G., Vitukhnovskaya, B. S.

TITLE: Cesium-and Chromium Manganic Fluoride (Ftoromanganiaty tseziya i khroma)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5, pp 1185 - 1187 (USSR)

ABSTRACT: The syntheses of $Cs_2MnF_5 \cdot H_2O$ and $MnF_3 \cdot CrF_3 \cdot 6 H_2O$ were carried out.
$Cs_2MnF_5 \cdot H_2O$ has light rose-colored crystals and is very easily decomposable with water. $MnF_3 \cdot CrF_3 \cdot 6 H_2O$ forms difficultly soluble lilac crystals. Their composition was determined by means of chemical analyses. The gradual formation constant of the above-mentioned complexes was calculated. In aqueous solution, the following complexes can simultaneously exist:

$[CrF_2(H_2O)_4]^+$ and $[MnF_4(H_2O)_2]^-$.

Card 1/2

78-3-5-21/39

Cesium-and Chromium Manganic Fluoride

The probable composition of $MnF_3 \cdot CrF_3 \cdot 6\ H_2O$ is the following:

$[CrF_2(H_2O)_4][MnF_4(H_2O)_2]$ or $[CrF_2(H_2O)_5][MnF_5H_2O]$.

There are 9 references, 4 of which are Soviet.

SUBMITTED: May 15, 1957

AVAILABLE: Library of Congress

1. Complex compounds--Synthesis 2. Complex compounds--Chemical analysis 3. Cesium--Chemical reactions 4. Chromium manganic fluoride--Chemical reactions

Card 2/2

VITUKHNOVSKAYA, M.S.

Determination of an economically expedient concentration of nitric acid used in the production of ammonium nitrate. Zhur. prikl. khim. 38 no.5:967-971 My '65. (MIRA 18:11)

VITUKHNOVSKAYA, M.S.; BELYANSKAYA, Ye.A.

Use of reductants for the regeneration of spent sulfuric acid. Zhur. prikl. khim. 33 no.11:2427-2434 N '60. (MIRA 14:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Sulfuric acid)

VITUKHNOVSKAYA,M. S.

Vitukhnovskaya, M. S. - "The problem of the preparation of hydrogen peroxide on a crude coal-tar base," Authors: M. B. Kartsynel', R. B. Yampol'skaya, M. S. Vitukhnovskaya and M. A. Dokukin. Nauch. zapiski (Dnepropetr. gos. un-t), Vol XXXIII, 1948, p. 43-45

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

L 43872-65 EWT(l)/EWT(m)/EWP(i)/EWP(b)/EWP(e)/EWP(t) Pi-4 IJP(c) WH/JD

S/0051/65/018/003/0446/0449

ACCESSION NR: AP5006431

SOURCE: Optika [illegible]

[illegible] luminescence spectrum, lattice defect,

color center

[illegible] diamonds mined from different kimberlite shafts

[illegible] diamonds with blue, green, or yellow [illegible] monochromator (UM-2) working

Card 1/2

L 43872-65

ACCESSION NR: AP5006431

390 nm. A different luminescence mechanism is shown to be associated with [illegible] of [illegible]

[illegible]

SUBMITTED: [illegible]Mar64 ENCL: 00 SUB CODE: [illegible]

NR REF SOV: 006 OTHER: 011

Card 2/2 [illegible]

SIBLIKOVA, O.; VACHEK, J.; CERNA, M.; TESAREK, B.; VITULOVA, V.

Contribution to the metabolism of ketophenylbutazone. I. Cesk. farm. 11 no.3:118-123 Mr '62.

1. Vyzkumny ustav pro farmacii a biochemii, Praha Vyzkumny ustav chorob revmatickych, Praha.
(PHENYLBUTAZONE rel cpds)

LENOCH, F. prof. dr., DrSc.; VITULOVA, V.; HAVELKA, S.; SUSTA, A.

Secondary gout in hematopoietic diseases. Cas. lek. cesk. 104 no.14:387-391 9 Ap '65.

1. Vyzkumny ustav chorob revmatickych v Praze (reditel: prof. dr. F. Lenoch, DrSc.)

VITULOVA, V.

STEPAN, J.; VOJTISEK O.; DOSTAL, C.; VITULOVA, V. 4 CSSR

Research Institute for Rheumatic Diseases (Vyzkumny ustav chorob revmatickych)
Prague, director: Prof. Dr. F. Lenoch, DSc

Prague, Fysiatricky Vestnik, No 1, 1963, pp 13-18

"On the Late Reaction to Exogenous ACTH in Rheumatic Patients"

VITULOVA, V.; MARTINEK, K.

An uncommon complication of gold therapy. Fysiat. vestn. 43 no.6:356-359 D '65.

1. II. interni klinika (prednosta: prof. dr. J. Polcak) a III. interni klinika (prednosta - prof. dr. Pojer) lekarske fakulty University J.E. Purkyne, Brno.

VITULOVA, V.; VOTAVA, L.

Diabetic neurogenic arthropathy. Fysiat. vestn. 43 no.6:360-363 D '65.

1. II. interni klinika lekarske fakulty University J.E. Purkyne, v Brne (prednosta: prof. dr. J. Polcak).

GOGUADZE, V.P.; IVANOV, T.N.; VITUL'SKAYA, N.V.; KVESELAVA, V.M.;
NATROSHVILI, D.R.; PANKVELASHVILI, A.G.

Solubility of hydroxylamine sulfate in cyclohexanone ar
the separation of the cyclohexanone oxime complex syst
Soob. AN Gruz. SSR 37 no.3:567-572 Mr '65. (MIRA 18:5)

1. Institut prikladnoy khimii i elektrokhimii AN GruzSSR, Tbilisi.
Submitted June 15, 1964.

GOGUADZE, V.P.; IVANOV, T.N.; VITUL'SKAYA, N.V.; NATROSHVILI, D.K.;
KVESELAVA, V.M.

Permanganate number, fusibility, and refractive index of the system ε-caprolactam - cyclohexanoxime. Soob. AN Gruz. SSR 38 no.2:303-308 My '65. (MIRA 18:9)

1. Institut prikladnoy khimii i elektrokhimii AN GruzSSR, Tbilisi. Submitted June 15, 1964.

VITUSHINSKIY, V.I., prof.; GUGLIN, E.R., kand.med.nauk; NEDOGODA, V.V.

Posttraumatic chronic aneurysm of the heart. Kaz.med.zhur. no.5: 59-60 S-O '60. (MIRA 13:11)

1. Iz kafedr propedevticheskoy terapii (zav. - prof. I.V.Zherdin) i patologicheskoy anatomii (zav. - prof. V.I.Vitushinskiy Stalingradskogo meditsinskogo instituta i Stalingradskoy oblastnoy klinicheskoy bol'nitsy (glavvrach - A.I.Gusev).
(ANEURYSMS)
(HEART--DISEASES)

VITUSHINSKIY, V.I., prof. MIRONOVICH, Ye.N., dotsent

"Research papers of the experimental morphology laboratory of the Stalingrad Province Oncological Dispensary." no. 1. Arkh. anat. gist. i embr. 38 no. 5:119-121 My '60. (MIRA 14:2)

1. Adres avtorov: Stalingrad, ul.Lenina, Meditsinskiy institut.
(MORPHOLOGY)

VITUSHINSKIY, V.I.; IVANOV, N.P. (Stalingrad)

Intrapericardial cardiac teratoma in a newborn. Arkh.pat. 21 no.4:
71-72 '59. (MIRA 12:12)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. V.I. Vitushinskiy) Stalingradskogo gosudarstvennogo meditsinskogo instituta.
(HEART, neoplasms,
tertoma in newborn (Rus))
(TERTOMA, in inf. & child,
heart, in newborn (Rus))
(INFANT, NEWBORN, dis.
teratoma of heart (Rus))

USSR / Human and Animal Physiology. Blood Chemistry. T

Abs Jour	: Ref Zhur - Biol., No 15, 1958, No. 69991
Author	: Vitushinskiy, V. I.; Sergeyenko, I. I.
Inst	: Stalingrad Medical Institute
Title	: Changes in the Bone Marrow in Dogs Following Massive Hemorrhage with Subsequent Injection of Specific Serum
Orig Pub	: Sb. nauchn. rabot teor. i klinich, kafodr. Stalingr. med. in-ta, Stalingrad, 1956, 37-43

Abstract : Five dogs were subjected to loss of blood equal to three to five percent of the body weight. Within 30-60 min the dogs were transfused with specific serum "hemoinfusion" (H) to a volume equal to the amount of blood lost. The bone marrow (BM) was studied prior to and seven to eight days after the injection of the H, while in two surviving dogs, the marrow was studied in 12-15 days. Following transfusion of H, the BM showed an increase in the number

Card 1/2

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VITUSHKIN, A. G.

Vituškin, A. G. **Sufficient conditions for the boundedness of the linear variation of a function of three variables.** Mat. Sbornik N.S. 34(76), 307–322 (1954). (Russian)

62

A. S. Kronrod [Doklady Akad. Nauk SSSR (N.S.) 66, 797–800 (1949); Uspehi Matem. Nauk (N.S.) 5, no. 1(35), 24–134 (1950); these Rev. 11, 19, 648] introduced and studied the notion of the linear (total) variation $V(f)$ of a continuous function $f(P)$, of a point P, defined on an interval I in two (or more) dimensions. $V(f)$ may be defined by $V(f)=\int_{-\infty}^{\infty}\Phi(t)dt$, where $\Phi(t)$ is the number of components dividing I of the level-set $[f(P)=t]$ [cf. the second paper cited, p. 66]. In the first paper [§§10 and 11, p. 799] he asserted that $f(P)$ has a finite linear variation on the n-dimensional interval I if its $(n-1)$th partial derivatives satisfy the Lipschitz condition on I. The case $n=1$ is trivial, since then $V(f)$ equals the ordinary total variation of $f(P)$ on I [cf. S. Saks, Theory of the integral, 2nd ed., Warsaw-Lwow, 1937, Chap. IX, Theorem (6.4), p. 280]. The author establishes the case $n=3$, assuming the case $n=2$. For the latter he cites Kronrod's second paper, in which the reviewer has failed to locate it: however, the reduction from $n=2$ to $n=1$ is presumably easier than that from $n=3$ to $n=2$. *H. P. Mulholland* (Birmingham).

VITUSHKIN, A.G.

Certain estimates for set variations. Dokl.AN SSSR 95 no.3:433-434 Mr '54. (MLRA 7:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Kolmogorovym.
(Geometry,Differential--Projective) (Aggregates)

VITUSHKIN, A.G.

Thirteenth Hilbertian theorem. Dokl.AN SSSR 95 no.4:701-704
Ap '54. (MIRA 7:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Functions, Analytic)

VITUSHKIN, A. G.

USSR/Mathematics

Card : 1/1

Authors : Vitushkin, A. G.

Title : Determination of set variations and the metric law of duality

Periodical : Dokl. AN SSSR, 96, Ed. 5, 893 - 896, June 1954

Abstract : The article deals with generalization of the concept on variations of the Kronard's functions with two variables and formulation of the metric law of duality. Two definitions are given for variations of subsets in the Euclidian space (inductive and constructive variations) and, applying the terms used in the definitions of the variations of functions, formulates the metric law of dualities.

Institution : ....

Presented : Academician, A. N. Kolmogorov, March 24, 1954

VITUSHKIN, A. G.

USSR/ Mathematics

Card : 1/1

Authors : Vitushkin, A. G.

Title : Variations of functions of many variables and satisfactory conditions for their limitedness.

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1089 - 1091, June 1954

Abstract : Various theories are cited with respect to the variations of functions of many variables and the conditions for their limitedness. According to the Banach theory a single variation $V_1^1 (f)$ for a continuous function $f(x_1)$ determined on a certain section is numerically equal to the change of $f(x_1)$ on this section. It is thus evident that a single variation of a function is identical to the linear A. S. Kronrod variation. One reference.

Institution : The M. V. Lomonosov State University, Moscow

Presented by : Academician A. N. Kolmogorov, March 24, 1954

VITUSHKIN, A. G. (Anatoliy Georgiyevich)

Vituškin, A. G. O mnogomernyh variaciyah [On [illegible] [illegible] [illegible]. Izdat. Tehn.-Teor. Lit., Moscow, 1955. 220 pp. 5.85 rubles

The central [illegible] of this tract [illegible] with which

[illegible] for all larger k and ∞ for all smaller k. One rather more satisfactory string of [illegible] which the author does not mention, and which are still related by inequalities, is furnished by the cross-section integrals (Quermassintegrale) of the theory of convex figures; the latter have been extended to sets by [illegible] 124 [illegible] 127 [illegible]

[illegible] which are quite independent of one another [illegible] is termed

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[illegible] In the case of a set the *k*th variation

[illegible] connected with applications already announced in two notes [Doklady Akad. Nauk SSSR (N.S.) 95 (1954), 433–434, 701–704; MR 15, 945] and in particular with Hilbert's thirteenth problem. The author mentions also the problem of extending his definitions to an arbitrary metric space

2/3

[illegible]

VITUSHKIN, A.

USSR/ Mathematics - Urysohn's problem

Card 1/1 : Pub. 22 - 1/50

Authors : Vitushkin, A.

Title : Remarks on the Sitnikov solutions of a Urysohn problem

Periodical : DOK. An SSR 100/1, 5-8, Jan. 1, 1955

Abstract : An analysis is presented of the Sitnikov negative answer (solution) to the Urysohn question as to whether every (n-1) dimensional set can cut a ball of an n-dimensional Euclidean space in such a way that there would be a pair of points which cannot be connected with a plain curve by any continuum It was found that the Sitnikov solution would turn into a positive solution, if one considers the cutting of this ball from a homological point of view. A series of lemmas are proved in order to get a positive solution of the Urysohn problem even in such cases where the cutting of the ball is considered in the theoretically-set sense (topological). Two USSR references: (1952 and 1954).

Institution : The M. V. Lomonosov Moscow State University

Presented by : Academician P. S. Alexandroff, June 11, 1954

VITUSHKIN, A. G. Cand Phys-Math Sci -- (diss) "Variations of ~~[illegible]~~ Functions of Many Variables and ~~Adequate~~ sufficient Conditions for Their ~~Restriction.~~ Limitedness." Mos, 1957. 6 pp 22 cm. (Mos State Univ im M. V. Lomonosow), 130 copies (KL, 25-57, 108)

VITUSHKIN, A. G., Doc Phys-Math Sci --(diss) "On the difficulty of the task of tabulating." Mos, 1957. 18 pp (Acad Sci USSR, Math Inst im V. A. Steklov), 125 copies (KL, 52-57, 102)

20-114-4-3/63

AUTHOR: Vitushkin, A. G.,

TITLE: The Connection Between Variations of a Set and the Metric Properties of Its Complement (Svyaz' variatsii mnozhestva s metricheskimi svoystvami dopolneniy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 686-689 (USSR)

ABSTRACT: The present paper precisely explains results obtained previously (A.G. Vitushkin: O mnogomernykh variatsiyakh (On multidimensional variations), Moscow, 1955), which express the connection between the variation of a set and the metric properties of its complement. The following is proved: If a set approximates another set with sufficient accuracy, the variations of the first set have to be large compared with the entropy of the second set. Such results lead to some interesting evaluations of the theory of tabulation. Two theorems and 6 lemmata are given and also their proofs are carried out or at least indicated. There are 3 references, 3 of which are Slavic.

Card 1/2

The Connection Between Variations of a Set and the Metric Properties of Its Complement 20-114-4-3/63

ASSOCIATION: Moscow State University imeni M.V. Lomonosov (Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova)

PRESENTED: December 26, 1956, by A.N. Kolmogorov, Member of the Academy

SUBMITTED: December 25, 1956

Card 2/2

VITUSHKIN, A. G.

20-5-2/60

AUTHOR VITUSHKIN, A.G.
TITLE Some Estimates from the Tabulation Theory
(Nekotoryye otsenki iz teorii tabulirovaniya. Russian)
PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 5, pp 923-926(U.S.S.R.)

ABSTRACT Let the function f of a certain family be assumed as given. This
function f must be introduced into the memory of a machine, or a
table of p numbers must be set up, by means of which it is possible
to set up f with the assumed accuracy ε Not more than k of the simplest
operations are necessary for computation. From the definition of the
entropy $H_{\varepsilon}(F) = \log N_{\varepsilon}(F)$ the following is easily obtained: In the
case of an arbitrary manner of expressing the function (from which
we know that it belongs to F) not less than $p_0 \geqslant H_{\varepsilon}(F)$ double dis-
charges are necessary for its accumulation. It is usually of impor-
tance to know not only the amount of the information contained in
the object to be studied, but also the degree of complexity with which
this information is given. In the case of the simplest functional
spaces it is necessary that the amount p of the real parameters to
be accumulated and the number k of the elementary operations (which
must be of an accuracy of up to ε for the purpose of computing the
function from F), satisfy the inequation $p.\log \geqslant AH_{\varepsilon}(F)$. Here $A > 0$
denotes an absolute constant. The problem under investigation is
then fomulated in a more concrete form. The most natural methods of

Card 1/2

20-5-2-/60

Some Estimates from the Tabulation Theory

tabulation are apparently an ε-representation in the here defined sense. Actually, every method of this kind is reduced to the following: By means of arithmetical operations an assumed group of formulae is calculated with several assumed parameters. The values obtained are compared with an assumed set of constants, or these values are compared among themselves. In dependence on the results obtained by these comparisons some of the computed parameters are inserted into any of the assumed groups of formulae etc. If this process is repeated several times, the desired result is obtained. Such methods apparently fit into the framework of the definition given. The author then discusses a certain ε-representation of the family F. Three pertinent theorems are given and proved (No illustrations).

ASSOCIATION	Not given
PRESENTED BY	VITUSHKIN, A.G., Member of the Academy
SUBMITTED	25.12.1956
AVAILABLE	Library of Congress

Card 2/2

20-5-4/54

AUTHOR: VITUSHKIN~~, A.G.~~

TITLE: Absolute ε-Entropy of Metric Spaces (Absolyutnaya ε-entropiya metricheskikh prostranstv)

PERIODICAL: Doklady Akademii Nauk/SSSR/,1957,Vol.117,Nr 5,pp.745-747 (USSR)

ABSTRACT: The author completes and improves Kolmogorov's definitions [Ref.1] of the ε-Entropy of metric spaces and gives estimations of the ε-Entropy for some classes of functions. The author unfortunately chooses - without evident reason - new denotations deviating from those of Kolmogorov, so that the comparison with [Ref.1] is complicated. The author, however, does not only succeed in giving the order of the lower bound of the size of table, but also the bound itself. 2 Soviet references are quoted.

PRESENTED: By A.N. Kolmogorov, Academician, 19 October 1957

SUBMITTED: 1 August 1957

AVAILABLE: Library of Congress

Card 1/1

GAL'PERN, S.A. (Moskva); LOPSHITS, A.M. (Moskva); BALK, M.B. (Smolensk); ZHAROV, V.A. (Yaroslavl'); BYAKIN, V.I. (L'vov); ARNOL'D, V.I. (Moskva); MANIN, I.Yu. (Moskva); DYNKIN, Ye.B. (Moskva); PROIZVOLOV, V. (Moskva); ALEKSANDROV, A.D. (Leningrad); VITUSHKIN, A.G. (Moskva).

Problems of elementary mathematics. Mat. pros. no.3:267-270 '58.
(Mathematics--Problems, exercises, etc.) (MIRA 11:9)

20-119-3-4/65

AUTHOR: Vitushkin, A.G.

TITLE: On Best Approximations of Differentiable and Analytic Functions (O nailuchshikh priblizheniyakh differentsiruyemykh i analiticheskikh funktsiy)

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 119, Nr 3, pp 418-420 (USSR)

ABSTRACT: The present paper is a continuation of the author's investigations formerly published [Ref 1,2]. Let E_r^z be the space of the complex variables $z_1,\dots z_r$; G a subset of E_r^z, F a set of complex functions on G. Let $\left\{f_{\alpha_1,\dots,\alpha_n}\right\}$ and $\left\{\varphi_{\beta_1,\dots,\beta_m}\right\}$, $\sum_{i=1}^{n} \alpha_i < s$, $\sum_{j=1}^{m} \beta_j < s$ be two given finite function sequences; furthermore let be $f \in F$. Let $e^f_{s,n,m}(F)$ denote the greatest lower bound of the norm of

Card 1/4

On Best Approximations of Differentiable and Analytic Functions

20-119-3-4/65

$$(1)\quad f - \frac{\sum\limits_{\alpha_1+\dots+\alpha_n \leqslant s} \prod\limits_{i=1}^{n} (a_i)^{\alpha_i} f_{\alpha_1,\dots,\alpha_n}(x)}{\sum\limits_{\beta_1+\dots+\beta_m \leqslant s} \prod\limits_{j=1}^{m} (b_j)^{\beta_j} \varphi_{\beta_1,\dots,\beta_m}(x)}$$

if the complex numbers $a_1, a_2, \dots, a_n; b_1, \dots, b_m$ run through all possible values. Furthermore let $e_{s,n,m}(F)$ be the least upper bound of $e^f_{s,n,m}(F)$ for all $f \in F$.

Theorem: Let g be an r-dimensional closed parallelepiped, $F = F_{p+\alpha}$ the space of all p-times differentiable, real functions bounded on g by $c > 0$, the p-th derivatives on g satisfy the Hölder-condition with the constant 1 and the exponent α. Then it is

Card 2/4

20-119-3-4/65

On Best Approximations of Differentiable and Analytic Functions

$$e_{s,n,m}(F_{p+\alpha}) \geqslant \left[\frac{A(F_{p+\alpha})}{(n+m+1)\lg_2(2+s)}\right]^{(p+\alpha)/r}$$

where the constant $A(F_{p+\alpha}) > 0$ only depends on p, α, l, c, r and g.

A similar theorem for analytic functions in a bounded domain g.

A further theorem contains a condition which s,n,m must satisfy, if a given exactness ε is obtained by an approximation of the type (1).

The following assumption of the author seems to be of interest: An analytic function can be approximated much more exactly by a rational function

$$\sum_{k=0}^{n} a_k z^k : \sum_{k=0}^{m} b_k z^k$$

than by a polynomial of (n+m)-th degree. There are 2 Soviet references.

Card 3/4

On Best Approximations of Differentiable and Analytic Functions 20-119-3-4/65

PRESENTED: November 19, 1957, by A.N. Kolmogorov, Academician

SUBMITTED: November 19, 1957

Card 4/4

SOV/20-123-5-2/50

16(1)

AUTHOR: Vitushkin, A.G.

TITLE: Analytic Capacity of Sets and Some of Their Properties (Analiticheskaya yemkost' mnozhestv i nekotoryye yeye svoystva)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 5, pp 778-781 (USSR)

ABSTRACT: Let e be a bounded set of the complex plane $\mathcal{Z}$. Let the function $\varphi(z)$ be a) defined everywhere on $\mathcal{Z}$-e, $|\varphi(z)| \leq 1$, b) analytic everywhere outside of e, and c) $\lim\limits_{z\to\infty} \varphi(z) = 0$. Let $\gamma(e, \varphi) = \lim\limits_{z\to\infty} |z\varphi(z)|$ and $\gamma(e) = \sup\limits_{\varphi} \gamma(e, \varphi)$. According to V.D.Yerokin, the function $\gamma(e)$ is called the analytic capacity of the set e. The author enumerates 13 properties of $\gamma(e)$, e.g: 1. from $e'' \supset e'$ there follows $\gamma(e'') \geqslant \gamma(e')$; 2. if e is a continuum, then $A\gamma(e) \leq d(e) \leq B\gamma(e)$, where d(e) is the diameter of e and $A > 0$, $B > 0$ are absolute constants. Furthermore there holds the theorem: If $\varphi(z)$ satisfies the conditions a), b), c), then it can be represented in the form $\varphi(z) = \sum\limits_{k=1}^{\infty} \frac{c_k}{(z-a)^k}$ outside of the sma lest circle containing e; here a is the center of tne circle and $|c_u| \leq A\,\gamma(e)\left[d(e)\right]^{k-1}$, $A > 0$.

Card 1/2

Analytic Capacity of Sets and Some of Their Properties SOV/20-123-5-2/5

Let C_e be the complement of e in the ζ-plane, let σ_z^r be an open circle of the radius r with the center z; let K_z^n be the closed ring between the circles with the radii $r_n = \frac{1}{2^n}$ and $r_{n+1} = \frac{1}{2^{n+1}}$. Let $P_z^r(e) = \frac{1}{r}\gamma(e \cap \sigma_z^r)$; $P_z(e) = \inf\limits_{r \to 0} P_z^r(e)$.

Theorem: For no $z \in e$ let $\sum\limits_{n=1}^{\infty}\left(\frac{1}{r_n}\right)^2 \gamma(C_e \cap K_z^n) < \infty$. Then for all r and z it holds $P_z^r(C_e) \geq \pi C_1$.

The author announces further results.

PRESENTED: October 8, 1958, by A.N.Kolmogorov, Academician
SUBMITTED: September 30, 1958

Card 2/2

SOV/20-123-6-1/50

16(1)

AUTHOR: Vitushkin, A.G.

TITLE: Some Theorems on the Possibility of a Uniform Approximation of Continuous Functions by Analytic Functions (Nekotoryye teoremy o vozmozhnosti ravnomernogo priblizheniya nepreryvnykh funktsiy analiticheskimi funktsiyami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6, pp 959-962 (USSR)

ABSTRACT: The present paper is a direct continuation of the author's paper [Ref 2] published in the preceding Nr 5 of this periodical. The assertion of the theorem of [Ref 2] is strengthened, it holds $P_z^r(C_e) = 1$. Under the assumptions of the theorem of [Ref 2] it holds: Every function uniformly continuous on e can be approximated uniformly and arbitrarily exact by a function analytic in a certain neighborhood of e. Furthermore: If e is closed and if the analytic density in every accumulation point of e is greater than ε, $\varepsilon > 0$, then for the developability of a function f(z) into a uniformly convergent series of rational functions it is necessary and sufficient that f(z) is continuous on e and that it has a derivative in every inner point of e. Seven theorems and five lemmas with partly sketched proofs are given.

Card 1/2

Some Theorems on the Possibility of a Uniform Approximation SOV/20-123-6-1/50
of Continuous Functions by Analytic Functions

There are 3 Soviet references.

PRESENTED: October 8, 1958, by A.N.Kolmogorov, Academician

SUBMITTED: September 30, 1958

Card 2/2

Vitushkin, Anatoliy Georgiyevich

Theory of the transmission and processing of information. New York, Pergamon Press, 1961.
xvi, 206 p. tables.
Translated from the original Russian: Otsenka slozhnosti Zadachi tabulirovaniya, Moscow, 1959.
References: p. 197.

PHASE I BOOK EXPLOITATION SOV/3929

Vitushkin, Anatoliy Georgiyevich

Otsenka slozhnosti zadachi tabulirovaniya (Estimating the Complexity of the Tabulation Problem) Moscow, Fizmatgiz, 1959. 228 p. (Series: Sovremennyye problemy matematiki) 7,000 copies printed.

Eds.: M.Ya. Antonovskiy and M.M. Goryachaya; Tech. Ed.: S.S. Gavrilov.

PURPOSE: This book is intended for graduate students and scientific workers in the field of mathematics and cybernetics.

COVERAGE: The author derives a numerical estimate of the degree of difficulty of the problem of tabulation for different classes of functions. Several specific methods of constructing tables so as to give optimum results are presented. The author bases his conclusions on the results of the theory of functions, among them his own investigations published in the monograph O mnogomernykh variatsiyakh. It is necessary to evaluate the quality of the various tabulation methods in order to automate the selection of the tabulating method with the aid of digital computers. This work, therefore, is the first step toward utilizing

~~Card 1/5~~

the concepts of the theory of functions in the field of computer mathematics. The first three chapters deal with the concept of the ε- entropy of a metric space and with estimates of the ε - entropy of several spaces of analytical and differentiable functions. The fourth and fifth chapters consider variations of subsets of Euclidean spaces and estimate the variations of several specific sets (algebraic surfaces). The two last chapters introduce estimates of the complexity of setting up tables for several specific classes of functions (for instance, for analytical and differentiable functions). The author thanks A.A. Lyapunov and A.L. Brudno. The author credits a student at Moscow University, V.I. Arnol'd, for his refutation of the Hilbert hypothesis. There are 11 references: 8 Soviet, 2 German, 1 English (in Russian translation).

TABLE OF CONTENTS:

3

16(1) SOV/20-127-2-3/70

AUTHOR: Vitushkin, A.G.

TITLE: Example of a Set of Positive Length With Zero Analytic Capacity

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 246-249 (USSR)

ABSTRACT: By the construction of a counter-example (a set of positive length with a vanishing analytic capacity) the author refutes an inequation of his earlier paper [Ref 3]. 1 theorem and 4 lemmas are formulated.
There are 3 references, 2 of which are Soviet, and 1 American.

PRESENTED: April 1, 1959, by A.N.Kolmogorov, Academician.

SUBMITTED: April 1, 1959

Card 1/1

SOV/20-128-1-3/58

16(1)

AUTHOR: Vitushkin, A.G.

TITLE: Necessary and Sufficient Conditions for a Set in Order That any Continuous Function on it Could be Approximated Uniformly by Analytic or Rational Functions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 17-20 (USSR)

ABSTRACT: Let τ be the z-plane, $z = x + iy$; e a bounded subset of τ ; Ce complement of e in τ ; $\gamma(e)$ the analytic capacity of e ; σ_z^r a closed circle in τ with the radius r and center z.

Theorem : In order that every complex function f(z) uniformly continuous on e can be approximated with every given exactness on e by a function analytic in a certain neighborhood of e, it is necessary and sufficient that for every circle σ_z^r the equation

$$\gamma\left(Ce \cap \sigma_z^r\right) = r = \gamma(\sigma_z^r)$$

is satisfied.

The author gives two further formulations of the same theorem

Card 1/2

Necessary and Sufficient Conditions for a Set in SOV/20-128-1-3/58
Order That any Continuous Function on it Could be Approximated Uniformly
by Analytic or Rational Functions

and one conclusion.
S.N. Mergelyan, M.A. Lavrent'yev, and M.V. Keldysh are mentioned.
There are 2 Soviet references.

PRESENTED:	May 14, 1959, by A.N. Kolmogorov, Academician
SUBMITTED:	May 13, 1959

Card 2/2

VITUSHKIN, A.G.; IVANOV, L.D.; MEL'NIKOV, M.S.

Incommensurability of the minimal linear measure with the set length. Dokl. AN SSSR 151 no.6:1256-1259 Ag '63. (MIRA 16:10)

1. Predstavleno akademikom A.N.Kolmogorovym.

VITUSHKIN, A.G.

Some properties of linear superpositions of smooth functions.
Dokl. AN SSSR 156 no. 5:1003-1006 Je '64. (MIRA 17:6)

1. Predstavleno akademikom A.N.Kolmogorovym.

VITUSHKIN, A.G.

Denjoy's problem. Izv. AN SSSR. Ser. mat. 28 no. 4:745-756 Jl-Ag '64.
(MIRA 17:9)

VITUSHKIN, A.G.

Proof of the existence of analytic functions of several variables not representable by linear superpositions of continuously differentiable functions of fewer variables. Dokl. AN SSSR 156 no.6:1258-1261 Je '64. (MIRA 17:8)

1. Predstavleno akademikom A.N. Kolmogorovym.

KOROBOVA, Nina Mikhaylovna; VITUSHKIN, B.I., red.; PRESNOVA, V.A.,
tekhn. red.

[Labor productivity in agriculture and ways for increasing it]
Proizvoditel'nost' sel'skokhoziaistvennogo truda i puti eo povysheniia. Leningrad, Lenizdat, 1962. 60 p. (MIRA 16:2)
(Leningrad Province--Agriculture--Labor productivity)

VITUSHKIN, N. I., NARYADCHIKOV, D. I., PETROVSKIY, V. I. and ZATULOVSKIY, V. I.

"Sources of Ionizing Radiation for Radiation-chemical Research"

Truly Transactions of the First Conference on Radioaction Chemistry, Moscow,
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

VITUSHKIN N.I.

KUZMINSKIY, A. S., NIKITINA, T. S., ZHURAVSKAYA, E. V., OKSENT'YEVICH, L. A., SUNITSA, L. L., and VITUSHKIN, N. I.

"The Effect of Ionising Radiations on Crude and Vulcanized Rubbers,"

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

KUZ'MINSKIY, A.S.; RUZER, L.S.; SUNITSA, L.L.; Prinimali uchastiye:
VINOGRADOV, V.V.; VITUSHKIN, N.I.; YEVLAMPIYEV, A.I.; OSIPOV, V.B.

Apparatus with a source of gamma rays of Co^{60} with 16,000 g-equivalent of radium for radiochemical investigations of crude and vulcanized rubbers. Kauch. i rez. 20 no.11:8-10 N '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber) (Gamma rays)

[illegible] (NIIRP) [illegible]
[illegible]

ACC NR: AT6034057 SOURCE CODE: UR/0000/66/000/000/0160/0164

AUTHOR: Morozov, Yu. L.; Vitushkin, N. I.; Glazunov, P. Ya.; Rafikov, S. R.; Khomutov, A. I.; Tsetlin, B. L.

ORG: Institute of Organometallic Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR); Scientific Research Institute for Fiberglass (Nauchno-issledovatel'skiy institut steklovolokna); Institute of Physical Chemistry AN SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: Radiation gas phase graft polymerization on glass fibers

SOURCE: Simpozium po radiatsionnoy khimii polimerov. Moscow, 1964. Radiatsionnaya khimiya polimerov (Radiation chemistry of polymers); doklady simpoziuma. Moscow, Izd-vo Nauka, 1966, 160-164

TOPIC TAGS: radiation polymerization, graft copolymer, polymerization kinetics, glass fiber, acrylonitrile

ABSTRACT: The kinetics of radiation gas phase graft polymerization onto inorganic surfaces were investigated using X ray tube TRTs-3a as the radiation source, acrylonitrile as the monomer, and three types of glass fibers as substrate—1) conventional nonalkaline nonporous glass fiber, 6-7 micron diameter; 2) fine-pored (6-7 Å effective pore diameter) fiber made by treating the former with hydrochloric

ACC NR: AT6034057

acid; and, 3) coarse-pored fiber (40 Å effective pore diameter) made by acid treatment of sodium borosilicate fiberglass. Reaction rates were measured directly under the beam with the help of a McBain type device. Induction of the graft polymerization reaction on the nonporous fiber was slow; with the porous materials the induction period was short, with more polymer forming on the coarser material. However when the pores were filled, the graft polymerization reaction rate was about the same as on the nonporous surface. Initial polymerization rates on all three fibers reached limiting values with monomer concentrations--at acrylonitrile vapor pressures were well under 100 mm Hg. In the porous samples the process rate is a linear function of the sorbed monomer concentration; the energy of activation is about 3 kcal/mol. The polymerization rate is proportional to the square root of the dosage for nonporous substrates--glass fiber, aerosil, powdered silica gel. Radical reaction mechanism was confirmed. The polymerization rate is a linear function of the dosage for the fine pored material, probably due to steric hindrance inside the pores rather than to a different reaction mechanism. Reaction initiation on metallic oxide and silicate materials is probably associated with the formation of the oxygen ion radical under ionizing radiation. Orig. art. has: 4 figures.

SUB CODE: 07, 11/ SUBM DATE: 25Jul66/ ORIG REF: 007

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EWP(i)/EWP(b)/T/EWA(1)/EWP(e) Pc-4/Pr-4/Ps-4/Pt-7/Pu-4/[illegible]

GG/RM/WH

ACCESSION NR: AP5012099 UR/0191/65/000/005/0003/0004

77

AUTHOR: Bessonov, A. I.; Vitushkin, N. I.; Glazunov, P. Ya.; [illegible] 73
[illegible] Rzhabchikova, [illegible];
[illegible]

TITLE: Unit for gas-phase radiation-induced graft polymerization

SOURCE: Plasticheskiye massy, no. 5, 1965, 3-4

TOPIC TAGS: graft polymerization, gas phase graft polymerization, radiation induced graft polymerization

ABSTRACT: A pilot-plant unit has been built for producing various graft polymerization products (combining the advantages of the con- [illegible] by the [illegible] of gas-phase radiation-induced graft polymerization in quantities sufficient for technical testing. [illegible] grafting polymer molecules to the surface of [illegible]
[illegible]
monomer and inert gas. The unit is designed to operate [illegible] monomers whose boiling point is above room temperature (Fig. 1 of the Enclosure) or 2) with monomers which are normally gaseous. In the

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ACCESSION NR: AP5012099

first case, to prevent monomer vapor condensation in the reactor and the pipe, the liquid monomer temperature in the feed tank is always maintained 30—50C below the working gas temperature. In the second case, the gaseous monomer is fed directly from a pressure cylinder. Two reactor types are available: one specifically design[illegible] fibers, films, and fabrics, and the other, for [illegible]. The [illegible] results shown in Table 1 of the Enclosure were in good agreement with results obtained in glass ampuls, indicating the feasibility and expediency of the scale-up of this process to full-scale plant equipment. "The authors express their appreciation to B. L. Tsetlin for participating in the discussion of the project and for valuable advice during startup, and to N. V. Mikhaylov, [illegible], and Ye. V. Yegorov for valuable advice on design problems." Orig. art. has: 1 figure and 1 table. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 02 SUB CODE: OC, GC

NO REF SOV: 005 OTHER: 000 ATD PRESS: 3246

Card 2/4

BESSNONOV, A.I.; VITUSHKIN, N.I.; GLAZUNOV, P.Ya.; KARAPETYAN, Sh.A.;
PARFANOVICH, B.N.; RYABCHIKOVA, G.G.; YAKUBOVICH, A.A.

Unit for radiation gas-phase graft polymerization. Plast. massy no.5:3-4 '65. (MIRA 18:6)

VITUSHKIN, V.

Adjustable cutter mandrel. Rech.transp. 19 no.1:47 Ja '60. (MIRA 13:5)

(Drilling and boring machinery)

YAKIMOV, P.A.; GORSHKOV, B.G.; LEBEDEV, N.A.; CHEKMEZOVA, O.V.; PETROVA,
E.B.; PODMOSTKOVA, V.A ; VITUSHKINA, A.T.

Utilization of starch-potato media in the production of penicillin.
Trudy Len.khim.-farm.inst. no.15:69-74 '62. (MIRA 15:11)

1. Kafedra tekhnologii antibiotikov (zav. - prof. P.A.Yakimov)
Leningradskogo khimiko-farmatsevticheskogo instituta i
Krasnoyarskiy zavod meditsinskikh preparatov (dir. - B.G.Gorshkov).
(PENICILLIN)
(BACTERIOLOGY- CULTURES AND CULTURE MEDIA)

SOV/81-59-16-56920

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 136 (USSR)

AUTHORS: Belokrinitskaya, Ye.Ye., Bondarenko, V.V., Vitushkina, I.N., Gerasimova, M.S., Ginzburg, V.L., Gramenitskiy, I.N., Livshits, D.M., Kryzhnaya, V.F.

TITLE: The Spectral Analysis of Cobalt for Metallic Impurities With the Use of Cast Electrodes

PERIODICAL: V sb.: Materialy 1-go Ural'skogo soveshchaniya po spktroskopii, 1956. Sverdlovsk, Metallurgizdat, 1958, pp 59-61

ABSTRACT: The samples are cast into chill molds in the forms of rods of 7 mm in diameter and 40 mm long. The butts of the rods are filed to a plane and treated by a HCl solution (1 : 1) for cleaning from Fe. The spectra are excited in an a-c arc with an upper carbon electrode and photographed with an average quartz spectrograph. The standards are prepared on the basis of pure cobalt, in which the concentration of admixtures is determined chemically. Ni, Fe, Si, Mn, Al, Cu, As and Sb can be determined with a mean error of 5 - 15%.

G. Kibisov

Card 1/1

ViTushKiNA, I.N.

USSR/Optics - Optical Methods of Analysis. Instruments. K-7

Abs Jour : Referat Zhur - Fizika, No 3, 1957, 7962

Author : Vitushkina, I.N., Ginzburg, V.L.
Inst : Noril'sk Mining and Metallurgical Combine, USSR.
Title : Spectral Analysis of Nickel in Low-Voltage Spark Using Cast Electrodes.

Orig Pubq : Zavod. laboratoriya, 1956, 22, No 4, 438-440

Abstract : In the determination of copper and iron admixtures in pure nickel, the spectrum is excited by a DG-1 generator, operating in the spark mode (current 2 -- 2.5 amp). The analytic pairs of lines are Cu 3273.96 -- Ni 3286.95 A and Fe 2599.40/57 -- N 2551.01 A. The interval of the determined concentrations of copper and iron is 0.01 -- 0.5%.
The mean arithmetic error of the determination ranges from 5 to 9%.

Card 1/1

Orig Pub: Zavod. laboratoriya, 1956, 22, No 11, 1331-1333

Ab[illegible] made of the accuracy of analyses of fused nickel, copper regulus, fused cobalt and cathodic nickel, according to calibration graphs in Δ S, lg C coordinates, and in accordance with the solid graph method. Determinations were made of Cu, Fe, Au, Pt, Pd, Ni, Si, Mn, Pb, Sb, Bi, Sn, Co, at concentrations from several thousandth to decimal fractions of one percent, with spectrum excitation in arc discharge of direct and alternating current, and photographic recording on plates of type I, II and III. In most instances no substantial differences were found in the magnitude of errors with different calibration graphs.

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